FINAL MEETING SUMMARY

HANFORD ADVISORY BOARD
HEALTH, SAFETY, AND ENVIRONMENTAL PROTECTION COMMITTEE
June 18, 2015
Richland, WA

Topics in this Meeting Summary

This is only a summary of issues and actions discussed at this meeting, and it may not represent the fullness of represented ideas or opinions. This summary should not be used as a substitute for actual public involvement or public comment on any particular topic unless specifically identified as such.

Opening

Becky Holland, Health, Safety, and Environmental Protection Committee (HSEP) chair, welcomed the committee and introductions were made. Committee members adopted the January 2015 meeting summary following the incorporation of minor revisions.

Tank Farm Vapors Advice Response

Per Hanford Advisory Board (HAB or Board) protocol, HSEP members reviewed the DOE response to HAB Advice #282, Tank Farm Vapors, that the Board passed during the February 2015 HAB meeting. Committee members discussed each of the response bullets and noted the potential for follow up action where appropriate.

Committee Questions and Responses [1] [2]

Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments.

Response to Advice Point #1

C. The initial safety response of Washington River Protection Solutions (WRPS) following tank vapor exposures in 2014 involved moving tank farm workers to supplied air systems. Supplied air may not always be the best solution to mitigating tank vapor exposure, as it may also present hazards to workers under certain conditions. There are also heat concerns in the summer. The U.S. Department of Energy—Office of River Protection (DOE-ORP) and WRPS need to ensure that the solutions highlighted in the *Implementation Plan for Hanford Tank Vapor Assessment Report Recommendations* strike a good balance and protect workers while also not presenting additional hazards.

> *R. Is DOE-ORP encouraging the contractor to look into new technologies that could help to offset some of the heat concerns? Portable cooling systems could be a potential option.*
>
> *R. There was recently an article published in a local newspaper noting that work efficiency at the tank farms is only at 50% due to the summer heat and supplied air systems.*

Response to Advice Point #2

C. The point advising U.S. Department of Energy (DOE) to conduct an "epidemiological study" is problematic, as it denotes that tank farm workers should be followed over an extended period of time and examined for lung disease. However, in the case of vapor exposure, the mechanism for action and the chemicals of concern are not yet identified. An epidemiological study would need to tease out all of the background causes of lung disease and isolate those problems that are caused by the tank vapors themselves. The combination of these factors, combined with the small sample size of tank farm workers, means that an epidemiological study is not the appropriate path forward.

> *R. The intent of this advice point was for DOE to follow up specifically on those workers who have reported vapor exposure to see if there is any commonality in their symptoms. The advice recognized that there was a high level of background noise in this situation; the Board recommended that DOE look for a signal above that noise. This style of study is not epidemiological in nature.*

R. Many workers have continued concern regarding tank vapors. A simple compilation of available data to see if there are any health lessons that can be derived may provide helpful detail for both workers and the HAB.

Q. The DOE response to the advice appears to suggest that the agency is considering an epidemiologic study. The intent of the advice was for DOE to conduct a study that was more high-level, using data that

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Attachment 1: DOE Response to HAB Advice #282, Tank Farm Vapors
Attachment 2: Transcribed flipcharts

the agency already has available. Should the Board note this in a response to DOE, since their strategy appears to move beyond what the Board advised in a potentially counter-productive way?

Response to Advice Point #3

C. HAB members and the Tank Vapor Assessment Team identified ozone as a potential vapor of concern that may be causing worker issues. Ozone monitors may be purchased for a relatively low cost, and they may provide helpful insight into the presence of this vapor in the proximity of tank farm workers.

Response to Advice Point #4

C. DOE's response states that the agency is proceeding responsibly and that it has faith in its Third Party Administrator. Workers, following potential exposure to tank vapors and a visit to Kadlec Regional Medical Center, are told that they may follow up with their own personal physicians if they feel it is appropriate. However, because there is often no evidence of vapor exposure, worker claims for these follow-up visits are often denied, and workers are responsible for covering their own costs. The DOE response may not accurately reflect the medical advice that employees are being given.

> *R. Medical claims of workers should be able to reflect the uncertainty of the chemicals that they were potentially exposed to.*
>
> *R. Unless a tank farm worker is out for over three days, Washington State Department of Labor & Industries claims are unable to cover the absence, and workers must take vacation to cover their absence.*

Q. If a tank farm worker gets injured on the job and then initiates a follow-up visit with their own physician, is that follow-up visit covered?

> *R. Yes. In that case, worker harm is easy to demonstrate. Vapor exposure is less visible, and workers can usually show no harm except for not feeling well.*

Q. Is it common for workers to seek out follow-up physician visits following exposure?

> *R. It is not rare. Following a vapor exposure, many tank farm workers have demonstrated interest in getting a second opinion.*

Q. Does DOE have the legal ability to accomplish what the Board advised?

> *R. DOE does have the ability to better document vapors present within tank farms. Often, following an exposure, DOE will take measurements after the exposure has occurred, then send those measurements to healthcare providers. Vapors are often not present when these measurements are taken, and medical providers are unable to show a potential cause for any worker health issues.*
>
> *R. At the February Board meeting, DOE noted that the current program is in compliance with Washington State law.*

C. If the Board were to provide a response to DOE's response, it may need to expand upon advice point #4 and note that the largest current issue is the uncertainty that relates to the chemicals that workers are exposed to. Medical employees attempting to show causality have an incredibly difficult time drawing any conclusions, because there is still so much uncertainty around the mechanism of causation. The Board needs to find a way to communicate that uncertainty and advise DOE and the contractor to support workers by conveying exposure uncertainty.

> *R. With the exception of ozone, DOE has a list of chemicals that workers may be exposed to. The missing information is the concentration that an affected workers has been exposed to.*
>
> *R. Perhaps the Board could recommend that DOE provide this list of chemicals to medical practitioners and note that exposure could have been caused by any of the noted chemicals.*

The committee concluded discussion by noting that additional follow-up may be appropriate to clarify advice points presented in HAB Advice #282 and further advise DOE. Richard Bloom, HSEP vice chair, noted that follow-up advice did not hinge upon further briefings on the WRPS *Implementation Plan for Hanford Tank Vapor Assessment Report Recommendations*. Richard recommended that topic issue managers begin crafting response advice via email over the summer. Richard noted that issue managers would forward a completed draft of the advice to the committee for initial review.

Effectiveness of Beryllium Program

Stan Branch, U.S. Department of Energy—Richland Operations Office (DOE-RL), provided the committee with an update to the Hanford Site Chronic Beryllium Disease Prevention Program (CBDPP) and the Beryllium (Be) Corrective Action Plan (CAP). Key points from Stan's presentation [3] included:

- DOE-RL's Be CAP was approved by U.S. Department of Energy Headquarters (DOE-HQ) in September 2010. DOE-HQ then submitted a supplemental CAP to the U.S. Department of Energy—Office of Environmental Management in 2011.
- The most recent review of the Be CAP by DOE-HQ was in March 2015. Three opportunities for improvement were identified, including: (1) identify the CBDPP program activities that still need to be completed, (2) complete the implementation of the Rev 3 and the Rev 4 resolution forms, and (3) revise the Hanford Integrated Standards Management Plan.
- DOE-RL and DOE-ORP closed the Be CAP in April 2015, and Be CAP staff returned to their job assignments or equivalent positions effective April 27, 2015.
- To date, DOE has not identified any impacts to Be program funding.

Attachment 3: Hanford Site Chronic Beryllium Disease Prevention Program (DOE-RL presentation)

L. B. Sandy Rock, MD, HPM Corporation Occupational Medical Services (HPMC OMS) delivered an update on the HMPC OMS Beryllium Medical Surveillance Program. During his update [4], Sandy noted the following key points:

- Be sensitization is defined differently by different groups; generally it requires between one and two positive Be Lymphocyte Proliferation Tests (BeLPT). The test is biological, and it requires live, healthy cells (not frozen). The BeLPT is not perfect, and it is estimated to return false negatives approximately 30% of the time. However, it is currently the best commercially available strategy for demonstrating Be sensitization.

- If a BeLPT demonstrates that an employee is sensitized, they are placed in the voluntary program for three years of testing. Most of these individuals choose to travel to National Jewish Hospital to be tested for Chronic Beryllium Disease (CBD). Be sensitization may occur months or years after exposure to Be. The BeLPT does not note whether or not an individual who is Be sensitized will develop CBD at a later date. Be testing and CBD involve a high degree of uncertainty.

- A proposal for future analysis of Be sensitized workers will look at those individuals who were hired in 2010 or later. These rates should help to demonstrate the progress of the CBDPP and help to identify facilities at the Hanford Site where Be contamination may still be present.

Sandy's presentation included several graphs that demonstrated cases of Be sensitization and CBD by fiscal year. Sandy noted that the graph demonstrating BeLPT Positivity Rates by Fiscal Year is one of the most illustrative graphs of the grouping, as it demonstrates rates as opposed to raw numbers.

Committee Questions and Responses

Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments.

Q. What are the unique site characteristics at Hanford that make Be a problem? Was Be used at the Hanford Site primarily for purposes of shielding?

> *R. [DOE-RL] DOE views Be no differently than other contaminants on site. There are approximately 52 facilities that are known to be contaminated with Be. Most of these facilities were involved in some form of grinding or fabrication work. Be is not found anywhere in mass quantities.*

Q. What is the status of the Workers Comp Advisory Form?

> *R. [DOE-RL] The advisory form that the CBDPP team is working on tells individuals how their claim is being processed. DOE will use this form internally to ensure that worker claims are not being suppressed. The Senior Management Team identified that additional signatures were*

Attachment 4: Update of HPMC Occupational Medical Services Beryllium Medical Surveillance Program (HPMC OMS presentation)

needed on the form; therefore, the form is not yet finalized. The form is only for internal purposes as DOE coordinates with the State of Washington.

Q. Do workers have the ability to not sign the Workers Comp Advisory Form? What is the benefit to the employee if they do provide their signature?

R. [DOE-RL] Yes. Employees have the opportunity to not sign the Workers Comp Advisory Form. In that case, HPMC OMS will note that the employee did not sign the form. The benefit to employees who choose to sign the form is that it provides additional documentation that a claim is not being suppressed.

Q. What is the status of the work survey questionnaire that HSEP members were presented with at the January committee meeting?

R. [DOE-RL] The purpose of the work survey is to create a timeline of Hanford Site worker history, including facilities where workers may have been exposed to Be. Any identified commonalities may be further sampled for Be contamination. The survey will be administered by a certified industrial hygienist.

Q. Is there a schedule for the implementation of the overall CBDPP?

R. [HPMC OMS] There are a number of facets to the overall CBDPP; the Be CAP is just one piece. The implementation plan for the overall CBDPP is currently being drafted.

R. [DOE-RL] There are a number of aspects of the implementation plan that are still being worked on, and a number of changes are ongoing throughout the end of the fiscal year. One aspect of the March review by DOE-HQ was to move along these revisions.

Q. What is the relationship between the CBDPP and the Beryllium Awareness Group (BAG)?

R. [DOE-RL] DOE CBDPP team members meet weekly with the BAG and discuss issues from both a field- and policy-perspective. As issues and concerns are identified through these ongoing conversations, DOE will adjust procedures as needed.

Q. Why have there not been any cases of workers developing CBD in recent years? There have been over 100 cases of Be sensitization identified; it would be expected that at least one or two of these cases would have developed into CBD.

R. [HPMC OMS] The number of CBD diagnoses has gone down in recent years. This could be attributed to workers not getting tested.

Q. If you look at where workers have been in recent years, is it possible to derive information as to where Be contamination may still be present?

R. [HPMC OMS] Many of the workers who are sensitized have done work in Hanford's 300 Area. However, because exposure to Be is not easily linked temporally to Be sensitization, it is difficult to identify areas where exposure occurred. Any contemporary Be exposure on the

Hanford Site is from legacy Be. Looking at sensitized workers who have been hired within the past five years may help to demonstrate additional areas where contamination may be present.

C. Special controls for Be may need to be implemented at the Plutonium Finishing Plant complex as demolition work continues.

Q. What is the process at National Jewish Hospital relating to blood testing for a Be allergy.

R. [HPMC OMS] The test for a genetic predisposition to Be sensitization, as well as new testing methods for Be sensitization, look promising, but research and development continues and they are not yet approved nor are they commercially available. Genetic testing may demonstrate individuals who should be advised to stay away from areas on the Hanford Site known to be contaminated with Be, but such testing remains ethically controversially.

Committee members thanked Stan, Sandy, and John Franco, HPMC OMS, for the information. The committee agreed to continue seeking annual updates on Hanford's Beryllium Program.

Safety Culture Improvement Efforts (joint w/ TWC)

Introduction

DaBrisha Smith, DOE-ORP, introduced Dave Olson, WRPS President, and Ed Kennedy, WRPS Employee Concerns Program Manager and Safety Conscious Work Environment Coordinator, and noted that WRPS has been working diligently on safety culture since the organization began managing Hanford Site tank farms in 2004. DaBrisha noted that WRPS continues to work closely with DOE-ORP to ensure that safety culture within tank farms is robust.

WRPS Presentation

Dave opened his presentation by noting that safety is considered by WRPS to be the cost of admission for all work accomplished by the company, noting that WRPS considers all employees to be vital components of a safe company culture. In their briefing [5] to the committee, Dave and Ed noted the following key points:

- Employees have many opportunities to provide input on safe working strategies to WRPS managers. The culture of the organization strives to learn from employee experiences and incorporate any lessons-learned into future work and management strategies. WRPS leadership routinely visit the tank farms to talk to workers, observe conditions, and learn from on-site conditions.

- Strategies used to gather data for making informed safety decisions include (1) workforce involvement, (2) active lessons learning, and (3) ongoing trainings and drills.

Attachment 5: Safety Culture at WRPS (WRPS presentation)

- WRPS has on-boarded approximately 1,800 new employees over the last several months, and the company works to ensure that all staff are empowered to make safe decisions. Worker/manager relationships are vital to a safe environment. WRPS has incorporated many feedback loops to ensure consistency between what employees are saying and what they are doing as they conduct their work.

- WRPS conducted a baseline employee survey in 2004, and the organization conducts follow up surveys every 18 months. WRPS administered the most recent employee survey in December 2014. Questions asked on surveys remain consistent so that WRPS leadership can examine responses as they change over time. The results of the most recent survey demonstrates that, out of the 11 focus areas (e.g. leadership, employee/worker engagement, trust and accountability) measured, ten focus areas improved since the last survey and one remained constant.

Committee Questions and Responses

Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments.

Q. How is WRPS dealing with internal concerns regarding the design and management of tank farms? These issues appear to be causing some of the primary problems at the Waste Treatment and Immobilization Plant.

> *R. [WRPS] There are two issues at play: (1) personnel and (2) technical issues. Personnel are empowered to report any issues that they identify. Usually, if there are any technical issues identified at the tank farms, WRPS will stop work. To report these technical issues, employees may raise their hand to via WRPS's reporting system. If an employee is not satisfied with how a reported technical issue is resolved, they may request a review by the Executive Safety Review Team. These strategies are becoming especially important as WRPS begins work on the organization's first capital project, the Low Activity Waste Pretreatment System.*
>
> *R. [WRPS] If an employee is not satisfied with internal WRPS procedures for addressing a technical or a safety issue, leadership encourages employees to go to DOE-ORP with their concerns.*

Q. Were contracted workers included within the survey?

> *R. [WRPS] All subcontractors were invited to participate. WRPS can then provide any subcontractors with information on any weaknesses that they may have. WRPS does not provide this information to smaller subcontractors, because these organizations may be able to identify individual responses.*

Q. Would it be possible for HAB members to be provided with a copy of the WRPS's Safety Culture Sustainment Plan?

> *R. [WRPS] Yes. DOE-ORP will forward the plan to Cathy McCague, EnviroIssues, for HSEP distribution.*

Q. In past conversations about safety culture, the Board noted that a lack of worker issues is not indicative of a safer work environment. More reporting may demonstrate that workers are more willing to report issues to leadership. How does WRPS measure success in worker reporting?

> *R. [WRPS] The WRPS safety culture is such that if the Safety Review Board received no reports, leadership would be concerned that something within the organization was not functioning appropriately. DOE approaches the issue of safety with a similar mindset. Both organizations appreciate a robust number of employee concerns.*

Q. How does WRPS safety culture work to balance risks associate with tank farm operations and risks associated with safety equipment?

> *R. [WRPS] WRPS has an industrial hygiene program that works to analyze all of the risks that are associated with certain work. The industrial hygiene program uses analytic tools to ensure that WRPS is appropriately mitigating for hazards while not introducing new ones.*

HSEP thanked Dave and Ed for providing the committee with insights into tank farm safety culture. Committee members agreed to continue tracking the issue of safety culture, and they encouraged WRPS leadership to return to the Board if they had additional safety insights to share with HAB members.

Committee Business

HSEP Feedback on the HAB Fiscal Year 2016 Draft Work Plan [2] [6]

HSEP members reviewed the draft Fiscal Year (FY) 2016 HAB Work Plan and provided feedback on topics that fall under the committee's purview. Committee members identified the following potential changes to the document:

- Updating the topic of "Infrastructure Updates" to incorporate additional depth relating to traffic safety. HSEP members remarked that traffic is one of the most pressing safety issues at the Hanford Site. Committee members also noted that discussion of traffic safety on site may not be entirely covered by updates to infrastructure, as there may be alternative ways to improve safety (e.g. public transportation). HSEP members also identified that it would be difficult for DOE and the contractors to evacuate people from the Hanford Site on existing road infrastructure if there were an emergency. HSEP members requested a briefing from the Hanford Traffic Safety Group in order to best determine next steps for the Board to take on the topic. DOE will provide further detail on the group's mission, members, and availability to HSEP leadership.
- Removing the Annual Employee Concerns Program from the FY 2016 HAB Work Plan and placing it into the holding bin until further updates on the topic become available and necessary.

Attachment 2: Transcribed flipcharts
Attachment 6: Hanford Advisory Board FY 2016 Work Plan Action Overview

- Transitioning the topic of Safety Culture Improvement efforts so that HSEP is the lead committee. The topic could then be transitioned to a Committee of the Whole as HAB action becomes necessary.

HSEP 3-Month Work Plan

The HSEP committee will tentatively plan to hold a call in August in order to develop a plan for upcoming committee meetings. In the coming months, HSEP members will continue to track the topic of Workers Compensation as it relates to tank vapor exposures as part of their advice development.

At upcoming meetings, HSEP will work with the Tank Waste Committee to track several topics, including review of the *Implementation Plan for Hanford Tank Vapor Assessment Report Recommendations.*

Attachments

Attachment 1: DOE Response to HAB Advice #282, Tank Farm Vapors

Attachment 2: Transcribed flipcharts

Attachment 3: Hanford Site Chronic Beryllium Disease Prevention Program (DOE-RL presentation)

Attachment 4: Update of HPMC Occupational Medical Services Beryllium Medical Surveillance Program (HPMC OMS presentation)

Attachment 5: Safety Culture at WRPS (WRPS presentation)

Attachment 6: Hanford Advisory Board FY 2016 Work Plan Action Overview

Attendees

Board members and alternates:

Richard Bloom	Lynn Davison (phone)	Steve Hudson (phone)
Antone Brooks	Sam Dechter	Mike Korenko
Don Bouchey	Becky Holland	Liz Mattson (phone)

Others:

Ed MacAlister, DOE-RL	Madeleine Brown, Ecology	Cathy McCague, EnviroIssues
Kris Skopeck, DOE-RL	Mign Walmsley, Ecology	Brett Watson, EnviroIssues
Stan Branch, DOE-RL		John Franco, HPMC OMS
Joni Grindstaff, DOE-ORP		Sandy Rock, HPMC OMS
Jerry Holloway, DOE-ORP		Jennifer Copeland, MSA
DaBrisha Smith, DOE-ORP		Rich Marshall, North Wind/DOE-ORP
		Sharon Braswell, North Wind/DOE-ORP
		Ed Kennedy, WRPS
		Dave Olson, WRPS